Ecological Reference Worksheet **MT-NRCS**

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Contact for lead author: Bozeman, MT **Reference site used? No**
Date: 04/11/2005 **MLRA: 58AC Ecological Site: Saline Subirrigated 11-14" p.z.** This *must* be verified based on soils and climate (see Ecological Site Description). Current plant community *cannot* be used to identify the ecological site.

Indicators. For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above- and below-average years for **each** community within the reference state (when appropriate), and (3) cite data. Continue descriptions on separate sheet if needed. **Weight factors** are either 0.5, 1.0 or 2.0. The default factor is 1.0. A maximum of 8 indicators may be changed to 0.5 or 2.0. The rest remain at 1.0.	**Wgt. Factor**
1. Number and extent of rills: Minor rills (less than 0.5 to 1.0 inches in depth; less than 2.5 feet long) may be present in the reference state.	1.0
2. Presence of water flow patterns: Water flow patterns may be evident, especially following storms of greater intensity than "normal".	1.0
3. Number and height of erosional pedestals or terracettes: These should not be evident in the reference state.	1.0
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are *not* bare ground): Bare ground is less than 10% in the reference state.	1.0
5. Number of gullies and erosion associated with gullies: Gully erosion may be evident in the reference state, but only following storms of greater intensity than "normal".	1.0
6. Extent of wind scoured, blowouts and/or depositional areas: These are not present in the reference state.	1.0
7. Amount of litter movement (describe size and distance expected to travel): Litter movement varies by size and depth of litter. In the reference state, litter consists of both herbaceous and woody species. Litter will generally not move more than a 8-12 feet from where it originated.	1.0
8. Soil surface (top few mm) resistance to erosion (stability values are averages – most sites will show a range of values for both plant canopy and interspaces, if different): Stability values of 4-5 in plant interspaces. Stability values of 5-6 under plant canopies and at plant bases.	1.0
9. Soil surface structure and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different): Soil surface structure is granular. Organic matter is 3-5%. The A-horizon is 6 to 10 inches thick.	1.0
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Deep-rooted native warm season perennial bunchgrasses (and some rhizomatous grasses) and shrubs will optimize infiltration and runoff. Bunchgrasses should be no more than 0.5-1.0 feet apart, and woody species spaced several feet apart in the reference state.	1.0
11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): No compaction layer present in the reference state.	1.0
12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: >>, >, = to indicate much greater than, greater than, and equal to): Warm and cool season, tall grasses = cool season, mid grasses > sedges > or = bulrushes = rushes > or = very tall shrubs > or = forbs.	1.0
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence): Plant mortality is very low; decadence is minimal except in prolonged periods of drought (>5-6 years).	1.0
14. Average percent litter cover (50-70%**) and depth (**0.25 to .075 **inches).**	1.0
15. Expected annual production (this is TOTAL above-ground production, not just forage production): 2900 – 3200 #/acre. This would be the expected production for the reference state during average moisture years. 3000 pounds would be the expected production in a 12 inch average precipitation area.	1.0
16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "will continue to increase regardless of the management of the site" and may eventually dominate the site: Kochia, mustard spp., foxtail barley, dandelion, thistle spp., salt cedar, Russian olive, and suaeda.	1.0
17. Perennial plant reproductive capability: This is not impaired in the reference state. Except in extended periods of drought, plants are able to reproduce sexually or vegetatively.	1.0